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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,001	12/05/2003	Shigetoshi Watanabe	KYO.P0022	9105

7590 06/23/2006  
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EXAMINER
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VIJAYAKUMAR, KALLAMBELLA M

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/729,001

Applicant(s)

WATANABE ET AL.

Examiner

Kallambella Vijayakumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

- Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.
- The examiner has considered the IDS filed 03/30/2004 and 03/13/2006.
- Claims 1-7 are currently pending with the application.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- Claims 2 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitation "the mixed magnetic powder" in Line-4. There is insufficient antecedent basis for this limitation in the claim. It is suggested to amend this as "complex magnetic powder" in the claim to overcome this rejection.

The term "plate-like" in claim 7 is a relative term which renders the claim indefinite. The term "plate-like" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

#### ***Claim Rejections - 35 USC § 102***

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-4 are rejected under 35 U.S.C. 102(b) as anticipated by Shigeta et al (JP 09-027694).

Shigeta et al teaches a magnetic shield composition comprising a mixture of: (i). An amorphous positive magnetorestrictive soft magnetic alloy powder such as Fe-Cr(0.5-20 wt%)-Si(0.5-9 wt%) and  $(\text{Fe}_{1-y}\text{Ni}_y)_{100-x-w}\text{M}_x(\text{Si},\text{B})_w$ , wherein  $x=1-10$ ,  $y=0-0.4$ , and  $w=15-37$  wherein  $\text{M} = \text{Cr}, \text{Co}$ ; (ii). A crystalline alloy powder such as Permalloy, Tokuganhei2-115583 and Sendust <Fe(85%)-Si(9%)-Al(6%)> and (iii). A resin binder. The amount of the alloy powder in the composition ranged from 40-95 wt%, whereby the

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amount of binder will be 5-60 wt% (Abstract, Para 0009, 0011, 0014, 0022, 0023, 0039, 0040). The ratio of positive magnetorestriction material <amorphous> in the whole soft magnetism alloy powder ranged from 10-90 wt% that meets the ratio limitations in claim-2 (Para 0026). The particle size of the alloy particles ranged from 5-30 microns that meets the limitation particle size in claim-4. All the limitations of the instant claims are met.

The reference is anticipatory.

2. Claims 1-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shigeta et al (US 5,252,148).

Shigeta et al teach a dust core/compressed powder core made by press molding a composition containing 75-95 vol% soft magnetic alloy powder and the balance of organic/inorganic lubricants <connecting agent> (C-9, Ln 26-31, 40-42, 52-65; C-13, Ln 16-19). With regard to crystalline/amorphous components in claim-1 and their ratios in claim-2, the prior art teaches a soft magnetic alloy powder comprising 50-90 vol% crystalline phase, and remainder being amorphous phase. The soft magnetic alloy with the composition  $(\text{Fe}_{(1-a)}\text{Ni}_a)_{100-x-y-z-p-q-r}\text{-Cu}_x\text{-Si}_y\text{-B}_z\text{-Cr}_p\text{-M1}_q\text{-M2}_r$  and the elements and elemental ranges cited in the prior art meets the composition in claim-3 (C-7, Ln 20-59; C-5, Ln 56-C-6, Ln 37). With regard to claim-4, the prior art teaches a particle size of 10-3,000 micron (C-9, Ln 40-41). With regard to claims 5-7, the prior art teaches a wound dust core, a wound core, choke coils and a magnetic shield (C-1, Ln 36-41, C-4, 49-52; C-8, Ln 46-55, C-9, Ln 26-31). When the reference teaches a product that appears to be the same as, or an obvious variant of, the product set forth in a product-by-process claim although produced by a different process, the claim is not patentable. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) And *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP §2113. All the limitations of the instant claims are met.

The reference is anticipatory.

In the alternative that the disclosure by Shigeta et al be insufficient to arrive at the limitations of the instant claims by the applicants, it would have been obvious to a person of ordinary skill in the art to optimize the ratio of crystalline to amorphous phases in the soft magnetic alloy composition by varying the

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heat treatment and/or elemental composition with reasonable expectation of success because the prior art is suggestive of such modification (C-1, 60-66, Fig-2; C-6, Ln 3-31); and further fabricate a flat thin coil/inductor as a choice of engineering design with reasonable expectation of success, because, the prior art is suggestive that the dust core may have any desired shape and dimensions (C-9, Ln 30-31; C-8, Ln 46-55) and flat coils are well known in the art at the time of disclosure of the invention by the applicants (See Shafer et al, US 6,204,744).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on 8.30-6.00 Mon-Thu, 8.30-5.00 Alt Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kmv  
June 16, 2006.

  
Mark Kopec  
Primary Examiner